INTEGRATION OF STATISTICAL TECHNIQUES TO EVALUATE THE FATIGUE OF OPERATORS ON THE PRODUCTIVITY OF A COMPANY

Alexander Parody, Amelec Viloria, Marleidis Hernández, Arlis Niño, Jorge Cervera

Abstract.

The present study seeks to determine the influence of fatigue according to the Yoshitake's physical, mental, and general classification on the percentage of performance in workers of an assembly line of energy accumulators in a plant located on the north coast of Colombia. The study shows that the type of fatigue affects the performance of workers and this effect varies depending on: the work shift (morning, afternoon, or evening), the position (operator, assistant, or packager), and the experience or the age of the worker. All relationships were established from multiple linear statistical models, applying a 95% of confidence in the models for the three studied shifts, presenting values of R squared above 76% showing that the models are highly explanatory and reliable

Keywords

Multiple linear regression, Physical fatigue, Mental fatigue, General fatigue, Productivity